

**Listing of Claims:**

1. (Previously presented): A protein binding assay for measuring inositol 1,4,5-triphosphate ( $IP_3$ ) in a sample employing as reagents a conjugate of  $IP_3$ , a fluorescent label joined through  $-R-Z-$ , wherein R is a bond or linker at the 2-hydroxyl position of said  $IP_3$ , R is of not more than 16 atoms in the chain and Z is selected from the group consisting of oxy, amino, thio, succinimidyl, amino, ureido, ester, phospho, thiophospho, and oxalo, and as a binding protein a 226 – 578 amino acid extracellular portion of mouse inositol 1,4,5-triphosphate receptor ( $IP_3R$ ) having at least about 200 times the affinity for  $IP_3$  than the intact  $IP_3R$ , wherein said conjugate and  $IP_3$  in the sample compete for binding to said binding protein and the amount of bound or unbound conjugate will be related to the number of binding proteins bound by  $IP_3$  in said sample, said method comprising:

combining in an assay medium said sample, said conjugate and said binding protein and incubating said mixture for sufficient time for complex formation of  $IP_3$  and said conjugate with said binding protein; and

detecting the bound or unbound label as a measure of the  $IP_3$  present in the sample.

2. (Original): A protein binding assay according to Claim 1, wherein said assay is in a homogeneous format.
3. (Original): A protein binding assay according to Claim 1, wherein said sample is a cellular lysate, and wherein said cellular lysate has been treated to block kinases and phosphatases and prepare said sample for said assay.
4. (Previously Presented): A protein binding assay according to Claim 1, wherein said binding protein is of not more than about 600 amino acids and

comprises at least amino acids 226 – 578 of the mouse IP<sub>3</sub>R Type 1 fused to glutathione-S-transferase.

5. (Canceled).
6. (Original): A protein binding assay according to Claim 1, wherein said binding protein is a fusion protein of up to about 1.5kD amino acids.
7. (Previously presented): A protein binding assay according to Claim 1, wherein said label is 2-O- (2-aminoethyl- (6-carboxamidofluoresceinyl).
8. (Original): A method according to Claim 1, wherein the order of addition of reagents is: (a) combining said sample with said binding protein; and (b) adding said conjugate, with incubating after (a) and (b).
- 9 -21. ( Canceled).